ing position yet the patient is able to perform with his legs any movement ordered with great "surety" and "rapidity" (L.'s correction of Ferrier's words is that these movements are performed with "energy" and "vigor") is to L. no proof against the validity of his theory. The above clinical experience only proves (says L.) that the static ataxy observed was neither dependent upon paresis nor paralysis, nor incoördination, but solely the result of asthenia; that is, lessening of energy and vigor of the muscles of the legs, making them unable to support the weight of the whole body, but not to raise and move the legs normally.

L further calls attention to the manner of swimming by dogs which have been deprived of one-half of their cerebellum. On account of the lessened vigor in the movements of the extremities of the operated side the body is inclined towards the latter so that the operated side is more deeply immerged in the water than the other. For the same reason the animals are not able to swim in a straight line, but are compelled to describe curves with deviation towards the healthy side. Ferrier contends that under the conditions mentioned the reverse would have to take place: viz., the animals would be compelled to describe curves towards the weakened side. To prove Ferrier's error L. justly calls attention to the manner of swimming of the dogs, which consists in downward, inward, backward movements of the paws. The asthenia (continues L.) also shows itself in the station of the operated dogs. They keep the extremities of the operated side in exaggerated, abducted position, thus creating a broader base for the support of the body and diminishing the work of the weakened muscles.

According to L. the second group of disturbances following cerebellar ablations (at the time when the irritative symptoms have disappeared), viz., the "neuro-muscular atony" has nothing directly to do with the tendon reflexes. The author contends that exaggerated tendon reflex would be no proof against an atonic state of the muscles in question; as a rule some time after the operation the tendon reflexes become indeed somewhat exaggerated.

One manner of manifestation of the neuro-muscular astasia is the exaggerated manner in which the limbs are raised and put down in walking. L. has do objection to make against Herbert Spencer's (cited by Ferrier and Ross) hypothesis concerning the function of the cerebellum. The result of his researches harmonizes with the theory that "the cerebellum regulates the continuous and tonic muscular contractions." L. makes a distinction between this continuous functional influence of the cerebellum.

The author feels complimented that his researches have made such a deep impression on Ferrier's mind, and particularly that he now no more speaks of the cerebellum as of an organ of equilibrium, nor as of an accumulation of unconscious centres of reflex adaptation. If Ferrier had not felt too sorry for being compelled to give up his previous ingenious hypothesis concerning the physiology of the cerebellum he would now be one of the strongest, and certainly most competent, supporters of his (L.'s) doctrines.

In conclusion, the author calls attention to some of the inexactitudes in Ferrier's last publication. As an example, he mentions that according to the corresponding photographs, two-thirds of the cerebellum had remained intact in a case which Ferrier and Turner described as complete extirpation of the cerebellum. ONUF.

Is there Hysterical Nystagmus? Sabrazes, (*Semaine Med.*, Sept. 26, 1894).

Such is the question which the author answers in the affirmative. After discussing the various affections in which nystagmus may be an important symptom, and after quoting the dictum of Charcot, that nystagmus is never found in hysteria, the author relates a case, which is evidently hysterical, in which nystagmus was well marked, and not dependent upon any ocular defect. To prove its hysterical basis, the author cites the fact that it disappears under hypnotic suggestion, and that it was accompanied by retraction of the visual fields. J. C.

Crossing of the Respiratory Paths in the Cord.—Porter (*Centralb. für Physiol.*, viii. 7, 1894).

The author concludes: 1. That the respiratory paths ascend in the lateral columns of the cervical cord. 2. That stimulation from the medullary centres can excite, unless dyspnœa prevents, the phrenic centre of the other side. 4. This diacussution occurs at the level ef the phrenic centre. 4. Such a discussation does not occur in the cord between the phrenic centre and calamus scriptorious. J. C.

The Trophic Properties of Nerves.—Gaule. (*Berlin. Klin. Wochenschr.*, Nos. 44 and 45, 1893.) The contention of the author is that trophic properties are not dependent upon special trophic nerves, but that such properties are furnished nerves by their ganglionic cells. To the objection of Eckard, that if such be a fact then we should not get atrophy by section of the trigeminal centralwards from the Gasserian ganglion, which the latter has frequently produced, Gaule replies that he has repeated the experiment of Eckard and is convinced that the nerve contains as far as this point: *i. e.*, a point considerable distance from the pons a great number of ganglionic cells.

Injury of the third, fourth, fifth and sixth spinal ganglion in the rabbit is followed by trophic troubles in the skin, the glands and muscles, not alone on the same side as the injury, but on the other side as well; and not alone in the territory of the corresponding ganglion, but also in the territory of other nerves. When the ganglion has previously been denuded, irritation and lesions are without result. The alteration which it produces in the ganglionic cells effects results by being carried to the spinal cord through the posterior roots. In order to obtain trophic lesions in the rabbit which shall be confined to the same muscles, the author experimented on the inferior cervical ganglion of the sympathetic. The changes that followed were in every instance confined to the same portion of the brachial biceps, and the psoaus iliacus' and showed identical characteristics. As in some of the cases, the affected muscles were on the same side as the experiment was performed on, sometimes on the opposite side, and sometimes the muscles of both sides, one is obliged to admit that the transmission was effected through the spinal cord by the aid of the communicating branches of the sympapathetic with the spinal nerves.

Gaule was able to follow the evolution of the alterations which went on in the midst of a muscle by the aid of his discovery of a nerve which stopped at a place adjoining the spinal ganglion. The irritation of this nerve-branch made the ganglion insensible to excitation, in spite of the fact that that section of the nerve caused exaggerated ganglionic sensibility. A few moments after excitation of the ganglion the muscle lost at one point of its surface its soft silken feeling. Then appeared a liquid at this point, and the surface of the muscle began to show lowered nutrition and to become rugous.

This depression involved the entire muscle, both on its external and internal surface. In the median portion it extended as far as the tendon, from which it was separated by a languette. In from five to ten minutes an ulceration was produced which was characterized by its very red color and with elevated borders. Often the ulceration was so extensive that it sufficed to cut the muscle in two. Not infrequently a considerable hæmorrhage followed or attended such ulceration, and this hæmorrhage penetrated into the neighboring muscular fibres and the connective tissues. The succession of phenomena in such conditions is as follows: The first alteration is a softening or liquefaction of the muscular fibres at the determinate point. The fibres do not break